CLAIMS

WHAT IS CLAIMED IS:

1. A method of switching between network interfaces of a computer, said computer having an active network interface connected to a router via first networking equipment and a standby network interface connected to said router via second networking equipment, said first networking equipment also connected to an active network interface of another computer, and said second networking equipment also connected to a standby network interface of said another computer, said method comprising the steps of:

detecting a fault occurring in a path between said active network interface of said computer and said router;

changing an Internet Protocol (IP) address assignment from said active network interface of said computer to said standby network interface of said computer; and

transmitting an Address Resolution Protocol (ARP) request from said standby network interface of said computer to said router to make said router change a Media Access Control (MAC) address registration mapped to said IP address, retained in an ARP cache of said router, from a MAC address assigned to said active network interface of said computer to a MAC address assigned to said standby network interface of said computer.

2. The method of switching between network interfaces of a computer as recited in Claim 1, wherein said step of detecting a fault further comprises the steps of:

transmitting an echo request packet from said active network interface of said computer to said router; and

determining that a fault occurs in the path between said active network interface of said computer and said router if no response to said echo request packet takes place within a given time.

3. The method of switching between network interfaces of a computer as recited in Claim 2, wherein said given time is preset, and further wherein said given time may be reset by a user during operation of the computer.

4. The method of switching between network interfaces of a computer as recited in Claim 1, further comprising the step of:

transmitting a network interface switching request packet from said active network interface of said computer to a destination IP address assigned to said active network interface of said another computer

in order to make said another computer change the IP address assignment from said active network interface of said another computer to said standby network interface of said another computer.

5. The method of switching between network interfaces of a computer as recited in Claim 3, further comprising the step of:

transmitting a network interface switching request packet from said active network interface of said computer to a destination IP address assigned to said active network interface of said another computer in order to make said another computer change the IP address assignment from said active network interface of said another computer to said standby network interface of said another computer.

6. The method of switching between network interfaces of a computer as recited in Claim 1, further comprising the steps of:

transmitting an echo request packet from said active network interface of said computer to said router after said changing step; and

changing again said IP address assignment from said standby network interface of said computer to said active network interface of said computer if a response to said echo request packet takes place within a given

time after the execution of said step of removing the IP address assignment.

7. The method of switching between network interfaces of a computer as recited in Claim 4, further comprising the steps of:

transmitting an echo request packet from said active network interface of said computer to said router after said changing step; and

changing again said IP address assignment from said standby network interface of said computer to said active network interface of said computer if a response to said echo request packet takes place within a given time after the execution of said step of removing the IP address assignment.

8. The method of switching between network interfaces of a computer as recited in Claim 1, wherein both said first networking equipment and said second networking equipment are selected from the group consisting of repeater hubs and switching hubs.

9. The method of switching between network interfaces of a computer as recited in Claim 6, wherein both said first networking equipment and said second networking equipment are selected from the group consisting of repeater hubs and switching hubs.

10. A method of switching between network interfaces of a computer, said computer having an active network interface connected to a router via first networking equipment and a standby network interface connected to said router via second networking equipment, said first networking equipment also connected to an active network interface of another computer, and said second networking equipment also connected to a standby network interface of said another computer, said method comprising the steps of:

receiving a network interface switching request packet from said another computer;

changing an IP address assignment from said active network interface of said computer to said standby network interface of said computer; and

transmitting an Address Resolution Protocol (ARP) request from said standby network interface of said computer to said router to make said router change a Media Access Control (MAC) address registration mapped to said IP address, retained in an ARP cache of said router, from a MAC address assigned to said active network interface of said computer to a MAC address assigned to said standby network interface of said computer.

11. The method of switching between network interfaces of a computer as recited in claim 10, wherein

both said first networking equipment and said second networking equipment are selected from the group consisting of repeater hubs and switching hubs.

12. A computer connectable to a network, comprising:

an active network interface that is connected to a router via first networking equipment to which an active network interface of another computer is also connected, wherein said router includes an ARP cache which relates IP address registrations to MAC address registrations;

a standby network interface that is connected to said router via second networking equipment to which a standby network interface of said another computer is also connected; and

a processor for executing a process, wherein said process is capable of detecting a fault occurring in a path between said active network interface of said computer and said router, further wherein said process is capable of changing an IP address assignment from said active network interface of said computer to said standby network interface of said computer, and further wherein said process is capable of transmitting an Address Resolution Protocol (ARP) request from said standby network interface of said computer to said router to make said router change a Media Access Control (MAC) address registration mapped to said IP address, retained in an ARP cache of said router, from a MAC

address assigned to said active network interface of said computer to a MAC address assigned to said standby network interface of said computer.

13. The computer connectable to a network as recited in Claim 12, wherein said processor is capable of detecting a fault by transmitting an echo request packet from said active network interface of said computer to said router and determining that a fault occurs in the path between said active network interface of said computer and said router if no response to said echo request packet takes place within a given time.

14. The computer connectable to a network as recited in claim 13, wherein said given time is preset, and further wherein said given time may be reset by a user during operation of the computer.

15. The computer connectable to a network as recited in Claim 12, wherein said processor is capable of transmitting a network interface switching request packet from said active network interface of said computer to a destination IP address assigned to said active network interface of said another computer in order to make said another computer change the IP address assignment from said active network interface of said another computer to said standby network interface of said another computer.

16. The computer connectable to a network as recited in Claim 12, wherein said processor is capable of transmitting an echo request packet from said active network interface of said computer to said router after said changing step and changing again said IP address assignment from said standby network interface of said computer to said active network interface of said computer if a response to said echo request packet takes place within a given time after the execution of said step of removing the IP address assignment.

17. The computer connectable to a network as recited in Claim 15, wherein said processor is capable of transmitting an echo request packet from said active network interface of said computer to said router after said changing step and changing again said IP address assignment from said standby network interface of said computer to said active network interface of said computer if a response to said echo request packet takes place within a given time after the execution of said step of removing the IP address assignment.

18. The computer connectable to a network as recited in Claim 12, wherein both said first networking equipment and said second networking equipment are selected from the group consisting of repeater hubs and switching hubs.

19. A computer connectable to a network, comprising:

an active network interface that is connected to a router via first networking equipment to which an active network interface of another computer is also connected, wherein said router includes an ARP cache which relates IP address registrations to MAC address registrations;

a standby network interface that is connected to said router via second networking equipment to which a standby network interface of said another computer is also connected; and

a processor for executing a process, wherein said process is capable of receiving a network interface switching request packet from said another computer, further wherein said process is capable of changing an IP address assignment from said active network interface of said computer to said standby network interface of said computer, and further wherein said process is capable of transmitting an Address Resolution Protocol (ARP) request from said standby network interface of said computer to said router to make said router change a Media Access Control (MAC) address registration mapped to said IP address, retained in an ARP cache of said router, from a MAC address assigned to said active network interface of said computer to a MAC address assigned to said standby network interface of said computer.

20. The computer connectable to a network as recited in claim 19, wherein both said first networking equipment and said second networking equipment are selected from the group consisting of repeater hubs and switching hubs.